In the Claims

Please cancel claims 1-9, 16-33 and 39-41 and amend claims 10, 11, 12, 15 34 and 36 as indicated.

1. – 9. (Canceled)

10. (Currently Amended) ~~The method of claim 9~~ A method for processing packets in a communications network implementing a TCP/IP protocol, comprising:

    a.   providing a network traffic accelerator (NTA) implementing internally an internal transport layer, an internal network layer and at least one internal data link layer, said internal transport, network and at least one data link layers connected along an internal receive path;

    b.   processing in said at least one internal data link layer a packet originating from a physical layer;

    c. ~~wherein said step of checking is preceded by the steps of~~ round robin arbitrating the joining on said receive path of said packets originating from internal and external physical layers, ~~and~~

    d.   forwarding said packets to said internal network layer;

    e.   checking whether said packet is supported by a protocol of said internal network layer; and

    f.   based on the result of said checking, processing said packet in a network layer selected from the group consisting of said internal network layer and an external network layer,

11. (Currently Amended) The method of claim ~~9~~ 10, wherein said result of said checking includes finding that said packet is protocol-supported, whereby said protocol-supported packet is processed in said internal network layer.

12. (Currently Amended) The method of claim ~~9~~ 10, wherein said result of said checking includes finding that said packet is protocol-unsupported, whereby said

protocol-unsupported packet is processed in said external network layer to yield a protocol-processed packet.

13. (Original) The method of claim 12, wherein said protocol-unsupported packets include IP fragment packets.

14. (Original) The method of claim 12, wherein said step of externally processing to yield a protocol-processed packet is followed by the step of returning said protocol-processed packet to said NTA for further processing in said internal transport layer.

15. (Currently Amended) The method of claim 9 10, wherein at least one of said internal transport, network and data link layers is implemented in hardware.

16. – 33. (Canceled)

34. (Currently Amended) The network traffic accelerator of claim 33, A network traffic accelerator comprising:

    a. an internal transport layer, an internal network layer and at least one internal data link layer connected along an internal transmit path and an internal receive path; and

    b. first means for processing a packet traveling along said receive path, said packet originating from a section layer selected from the group consisting of an internal physical layer and an external physical layer, wherein said packet is selected from the group consisting of a protocol-supported packet and a protocol unsupported packet,

    wherein each said packet is selected from the group of an external packet and an internal packet, and wherein said first means include a first arbiter connected in said internal return path to said internal network layer and operative to perform round robin arbitration between said external and internal packets and wherein said first means further include a first switch connected in said internal return path between said first arbiter and said internal data link layer, said first switch operative to direct a

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packet for processing in a network layer selected from the group of said internal network layer and an external network layer.

35. (Original) The network traffic accelerator of claim 34, wherein said packet directed for processing in an external network layer is returned as a protocol processed packet to the network traffic accelerator, the accelerator further comprising a second arbiter connected in said internal return path between said internal network and transport layers, said second arbiter operative to merge said protocol processed packet back into said internal return path.

36. (Currently Amended) ~~The network traffic accelerator of claim 32,~~ A network traffic accelerator comprising:

       a.   an internal transport layer, an internal network layer and at least one internal data link layer connected along an internal transmit path and an internal receive path;

       b.   first means for processing a packet traveling along said receive path, said packet originating from a section layer selected from the group consisting of an internal physical layer and an external physical layer;

       c.   second means for processing a packet traveling along said transmit path, wherein said packet is selected from the group consisting of a protocol-supported packet and a protocol unsupported packet and originates from a physical layer selected from a group consisting of an internal section layer and an external section layer;

       wherein said second means include a second switch connected in said internal transmit path between said internal transport and network layers, said second switch operative to direct a packet for processing in a network layer selected from the group of said internal network layer and an external network layer.

37. (Original) The network traffic accelerator of claim 36, wherein said second means further include a third switch connected in said internal transmit path to said internal network layer and operative to direct a packet for processing in an external data link

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layer.

38. (Original) The network traffic accelerator of claim 37, wherein said packet directed to said external network layer for processing becomes a protocol-processed packet, wherein said second means further include a third arbiter connected in said transmit path between said third switch and said internal data link layer, and wherein said third arbiter is operative to merge said protocol-processed packet back into said internal return path.

39. – 41. (Canceled)